

In the Claims

For the convenience of the Examiner, all of the claims are reproduced below regardless of whether amended or not.

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1. (Twice Amended) A video inspection system comprising:
a first image sensor having a plurality of sensor elements, the first image sensor operable to acquire an image in a first direction along a first axis;
a second image sensor having a plurality of sensor elements, the second image sensor operable to acquire an image in a second direction essentially perpendicular to the first direction; and
a camera board and processor coupled to the first image sensor and the second image sensor, the camera board and processor operable to receive an image from either the first image sensor or the second image sensor and prepare the image for display.

2. (Twice Amended) The video inspection system of Claim 1, wherein the second image sensor is an array of image sensors operable to [simultaneously] acquire an image 360 degrees around the first axis without rotating the second image sensor.

3. The video inspection system of Claim 1, wherein the first image sensor, the second image sensor, and the camera board and processor are mounted in a water tight, pressure sealed camera assembly for use in a bore hole or water well.

4. The video inspection system of Claim 1, wherein the first image sensor, the second image sensor, and the camera board and processor are mounted in a sealed camera assembly for use in a pipeline and the first axis is parallel to the long axis of the pipeline.

5. The video inspection system of Claim 3, wherein the camera assembly transmits images to a monitor via coaxial cable, the monitor operable to receive the output of the camera board and processor.

6. The video inspection system of Claim 5, wherein the coaxial cable includes a quick disconnect to allow easy removal and installation of other camera assemblies or tools.

7. The video inspection system of claim 5, wherein the coaxial cable is stored on a spool in a transportable case.

8. (Twice Amended) The video inspection system of Claim 5, wherein the coaxial cable passes over a cable arm encoder operable to determine the [depth of] distance that the camera has traveled and display it on the monitor with the output of the camera board and processor.

9. The video inspection system of Claim 1, wherein the first image sensor, the second image sensor, and the camera board and processor are mounted in a camera assembly operable to

rotate about the first axis when the second image sensor is acquiring an image.

Please cancel Claims 10-17 without prejudice or disclaimer.

18. (Twice Amended) A video inspection system comprising:
a housing rotatable from a first direction along the long axis of an object being inspected to a second direction approximately perpendicular to the first direction;

an image sensor [in a] coupled to the housing, the image sensor operable to capture an image in [a] the first direction [parallel to the direction of travel of the housing], the image sensor further operable to capture an image in [a] the second direction[, the second direction approximately perpendicular to the first direction] due to a rotation of the housing; and

a camera board and processor coupled to the image sensor and operable to process [the] each image and prepare it for display.

19. (Twice Amended) The video inspection system of Claim 18, wherein the housing is [rotatable and operable to rotate from the first direction to the second direction and] operable to rotate around the first axis, the image sensor operable to capture an image when in a first position, a second position and any position in between, thereby providing hemispherical coverage at a given location of the object being inspected.

Please cancel Claims 20-22 without prejudice or disclaimer.

23. The video inspection system of Claim 18, wherein the image sensor is mounted in a water tight, pressure sealed camera assembly for use in a bore hole or water well.

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24. (Amended) The video inspection system of Claim 18, wherein the image sensor is mounted in a sealed camera assembly for use in a pipeline [and the first axis is parallel to the long axis of the pipeline]

25. The video inspection system of Claim 18, wherein the image sensor is mounted in a sealed camera assembly and the camera assembly is attached to a monitor via coaxial cable, the monitor operable to receive the output of the camera board and processor.

26. The video inspection system of Claim 25, wherein the coaxial cable includes a quick disconnect to allow easy removal and installation of other camera assemblies or tools.

27. The video inspection system of claim 25, wherein the coaxial cable is stored on a spool in a transportable case.

28. The video inspection system of Claim 25, wherein the coaxial cable passes over a cable arm encoder operable to determine the distance that the camera has traveled and display

it on the monitor with the output of the camera board and processor.

29. (Amended) A system for video inspection of a passage comprising:

a carrying case having a deep housing and a removable cover;

a spool adapted for storing coaxial cable inside the carrying case, the coaxial cable exiting the carrying case at an opening;

a cable arm supported by an adjustable leg, the cable arm attached to the carrying case, the cable arm operable to have the coaxial cable pass over it; and[,]

a camera assembly, coupled to the coaxial cable, having a single camera operable to capture an image in a first direction along a long axis of the object being inspected and capture an image in a second direction, the second direction ninety degrees offset from the first direction.

30. The system of Claim 29, wherein the carrying case further includes a monitor operable to display the image captured by the single camera.

31. The system of Claim 29, wherein the coaxial cable includes a quick disconnect near the camera assembly.

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7

32. The system of Claim 29, further including a cable arm encoder operable to measure the length of cable to determine the distance the camera assembly has traveled.

33. A video inspection system comprising:
a camera assembly including:
an upper section having a camera card;
a stepper motor coupled to the end of the upper
section; and
a lower section coupled to the upper section and the
stepper motor, the lower section operable to rotate about an
axis when the stepper motor is operational, the lower section
further comprising:
an upper part having a high torque dc motor; and
a lower part coupled to the upper part by a
pivoting means, the pivoting means driven by the high torque
motor and operable to pivot the lower part from a down view to a
side view, the lower part further comprising an image sensor
coupled to the camera card and operable to acquire an image in a
down position and a side position and any position in between,
the image sensor further operable to acquire an image as the
lower section rotates about an axis.